

SUPPORT FOR THE AMENDMENTS

Support for the amendment of Claim 40 is found on page 10, lines 19-24, in the specification and in Fig. 10.

Claim 42 is amended to correct an obvious typographical error.

Claim 67 is new and is supported on page 10, lines 21-23, in the specification.

No new matter is believed added to this application by entry of this amendment.

Upon entry of this amendment, Claims 25-33, 35-43, 45, 47 and 67 are active.

REMARKS/ARGUMENTS

The claimed invention provides a process for producing a metal particle nucleic acid composite having particles which are subnanometer in size and a process for preparing nanowires.

The rejection of Claims 25-33, 35-43, 45 and 47 under 35 U.S.C. 112, first paragraph, is respectfully traversed.

Applicants described sub-nanometer size in the specification as originally filed on page 4, lines 24-27, as follows:

Also in contrast to the procedure of Pompe et al., the sub-nanometer size of the platinum particles in the nanoparticle/DNA composite produced according to the present invention are stable in time, at least for weeks or months.

Moreover, Applicants respectfully submit that subnanometer is supported by Figs. 2 and 5 which show AFM images of metal DNA composites. The scales indicated on each image shows that the individual metal particles are less than one nanometer. Applicants note the U.S. Court of Appeals Federal Circuit (*Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562, 19 USPQ2d 1111, 1115 (Fed. Cir. 1991)) which states:

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Drawings alone may under proper circumstances, provide “written description” of invention required by 35 U.S.C. 112, and whether drawings are from design application or utility application is not determinative.

In view of this guideline and the support provided in Figs. 2 and 5, Applicants respectfully submit that the application as filed meets the written description requirement.

Accordingly, withdrawal of the rejection of Claims 25-33, 35-43, 45 and 47 under 35 U.S.C. 112, first paragraph, is respectfully requested.

The rejection of Claims 25-31, 33-43, 45 and 47 under 35 U.S.C. 103(a) over Pompe, in view of Singh and Richter is respectfully traversed.

Applicants respectfully call the Examiner’s attention to the following excerpt from the Office’s own discussion of “**Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.***”

“The rationale to support a conclusion that the claim would have been obvious is that **all the claimed elements were known in the prior art** and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art at the time of the invention.⁴³ “[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”⁴⁴ **If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art,**” (Federal Register, Vol. 72, No. 195, page 57529) (**Bold added**)

Applicants have described on page 2, lines 19-23, that the primary reference describes particles with a diameter of 3-5 nm and further on page 4, lines 24-27, Applicants have described a difference of the claimed invention over the reference as follows:

Also in contrast to the procedure of Pompe et al., the sub-nanometer size of the platinum particles in the nanoparticle/DNA composite produced according to the present invention . . .

Richter, at page 509, right column, first paragraph, describes “The initially grown metal clusters (3-5 nm) are, for the first time, on the same scale as the diameter of the DNA itself.”

The disclosure of Singh does not cure the deficiencies of Pompe and Richter.

Therefore the cited combination of references does not teach all the claimed limitations and according to the KSR guidelines above, a conclusion of obviousness cannot be supported. Accordingly, withdrawal of the rejection of Claims 25-31, 33-43, 45 and 47 under 35 U.S.C. 103(a) over Pompe, in view of Singh and Richter is respectfully requested.

Applicants respectfully note that Claim 40 is herein amended to include the description: “chemically modifying at least one cytosine residue of a polynucleotide to attach an imidazole group as a metal ligand, and metalating the attached imidazole with a metal complex having a tridentate ligand and a leaving group to form a conjugated metal complex.”

Applicants respectfully submit that none of the cited references disclose or suggest the process as presently described in Claim 40 and claims dependent thereon.

The rejection of Claim 32 under 35 U.S.C. 103(a) over Pompe, in view of Singh and Richter and further in view of Newsman is respectfully traversed.

Claim 32 depends indirectly from Claim 25 and therefore includes the description of the independent claim. Applicants respectfully submit that Newsman does not cure the deficiency of the primary combination of references previously described. Accordingly, the cited combination of references cannot render Claim 32 obvious and withdrawal of the rejection of Claim 32 under 35 U.S.C. 103(a) over Pompe, in view of Singh and Richter and further in view of Newsman is respectfully requested.

Applicants respectfully request that the rejection of Claims 25-33, 35-43, 45 and 47 on the grounds of obviousness-type double patenting over claims 1-32 of U.S. Patent

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6,884,587 be held in abeyance pending identification of patentable subject matter in the present application.

Applicants respectfully submit that Claims 25-33, 35-43, 45, 47 and 67 are in condition for allowance and early notice of such is earnestly solicited.

Respectfully submitted,

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